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The Selection of Spelling Textbooks

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ALTHOUGH considerable concise research data are available, the majority of the items considered in the selection of textbooks are prone to be phrased in subjective, generalized terms. No matter how complete the appraisal may appear to be, the weakness of present-day textbook selection usually lies in the fact that the opinions and reactions of the appraiser are permitted to be the deciding factor. There is still need for more careful determination and definition of the criteria employed in the selection of a text.

At the risk of approximating a dogmatic attitude, the score card described herein is composed of criteria for which extensive definition is possible. Specific criteria have been formulated in place of such generalizations as "provision for individual differences," "recognition of established psychological principles,"

"adaptation to learning needs," etc. Of course the use of such a score card limits the number of textbook characteristics that may be considered. Such a score card hampers the user in exercising such judgment as he or she may muster. In the opinion of the writer these characteristics do not constitute limitations, however.

It will be noted that values or weights have not been assigned to the various items of the score card. In our opinion, this step is best completed after joint conference of the teaching and administrative staffs that will employ the score card.

The score card consists of four major divisions: 1, Instructions to Teachers; 2, Instructions to Pupils; 3, Vocabulary; and 4, Format and Arrangement. The derivation of each of these criteria is described at length in the latter half of this article.

SCORE CARD FOR THE SELECTION OF SPELLING TEXTBOOKS

I. Instructions to Teachers

A. Recommends and gives suggestions for:

1. Use of test-study method
2. Syllabication
3. Teaching of meanings and pronunciation

4. Teaching of simple derivatives with base forms in lower grades
5. Teaching of appropriate rules
6. Review by re-teaching and re-testing
7. Stressing of misspelled words
8. Use of list or modified sentence test

9. Use of the dictionary in grades IV to VIII
10. Games and similar helpful devices
- B. Advises against
 1. More than occasional use of oral spelling
 2. Exclusive use of list or context presentation
 3. Marking of "hard spots" in words
 4. Selection of spelling words from other fields of subject matter
- II. Instructions to Pupils
 1. Specific directions in methods of study
 2. Specific directions for use of misspelled word list
 3. Rules and directions for syllabication
 4. Directions in the use of the dictionary
- III. Vocabulary
 1. Selection of spelling vocabulary from adult and children's writing lists
 2. Grade placement of words according to difficulty, child usage and need
 3. Presents total vocabulary of 3000-5000 words
4. Presents moderate number of words (10-20) in each week's lesson
- IV. Format and Arrangement
 - A. Provides adequate space for:
 1. Initial test
 2. Final test
 3. Individualized study and activities
 4. Teacher-directed study
 5. Child's misspelled word list
 - B. Follows following principles:
 1. Grouping words according to
 - a. structure
 - b. phonic elements and syllables
 - c. common difficulty
 2. Presenting words in both list and context
 3. Presenting homonyms separately unless both are taught in the same grade. Reviews first when second is taught.
 - C. Provides
 1. Exercises training for use of dictionary
 2. Dictionary of spelling words
 3. Exercises in defining, using words, finding synonyms, etc.

Many of the principles underlying the psychology and teaching of spelling are as yet subjects of dispute. However, some principles can be clearly defined and others tentatively advanced. In those instances in which the evidence is conflicting or lacking, the conclusions offered are phrased by the writer. This summary is not intended to replace the excellent texts offered by Foran (10)¹, Breed (5) or Tidyman (41). The reader is urged to use these for more extensive information.

I. Instructions to Teachers

A.-1. *Test-Study Method*. Experimental data indicate that the study-test method wastes approximately 95 per cent of the time employed because of the fact that the spelling of many of the words studied is already known (27). Not only is it more economical of time, but the test-

¹ Parenthetical numbers refer to titles in the bibliography, page —.

study method also gives significantly better spelling efficiency, particularly with better spellers and above the third grade (13, 25, 31). The method is conceded to have the following advantages: 1, economy of time; 2, permits individual study according to individual needs; 3, promotes the acquiring of a technique for studying words; 4, is self-motivating in that a pupil may cease studying a word as soon as he can spell it; and 5, affords an opportunity for independent study.

2. *Syllabication*. Despite the lack of definite proof of its values, syllabication is almost universally recommended as an aid in learning to spell (18, 20, 50). Words should not be presented in divided form in the text. Syllabication is primarily an auditory device, not a visual one. Tidyman (41) points out that the normal perception span is three to five objects. Therefore, syllabication should

prove useful since it divides a word into a number of easily perceivable units.

3. *Teaching meanings and pronunciation.* Knowledge of meaning and correct pronunciation are indispensable to spelling. Two-thirds more words were misspelled when their meanings were unknown, according to Hollingworth's results (21). Reed's data (35) indicate that classes taught both meanings and spelling gained more and retained more than classes taught spelling alone. Mispronunciation is a widely recognized cause of misspelling. In the writer's review of studies of spelling errors (40), 11 of these cited mispronunciation as a frequent source of children's misspellings. Many of these commented upon the tendency toward phonetic misspelling of mispronounced words. This tendency has been observed among pupils of all school grades.

4. *Teaching of simple derivatives with base forms.* Simple derivatives should probably be taught with their root forms, i.e. *es, ed, ing, s* forms with base. Some of these are learned incidentally with the root forms according to Archer (2). Others, particularly those involving the changing of *y* to *i* or the doubling of the final consonant, apparently must be taught as individual words (3, 23). To include all derivatives in the spelling vocabulary would increase it to unwarranted size. Therefore, it becomes the task of the teacher to determine which derivatives of the spelling words being taught are learned spontaneously and which must be taught. If the latter are not placed elsewhere in the spelling vocabulary or if they are not taught in conjunction with certain rules, they probably should be taught with the base forms. In the early grades, the teaching of derivatives should receive as much attention as the roots since there is little transfer from

knowing how to spell a root to the spelling of its common derivatives.

5. *Teaching of appropriate rules.* In the absence of adequate evidence, early writers (12, 22) doubted the value of teaching spelling rules. However, we now know the frequency of occurrence and the approximate number of examples and exceptions in the average spelling list (38) as well as the extent of the application of spelling rules to common misspellings (28). These are fundamental facts in determining the values of rules.

In view of the evidence of Carroll (6), Archer (2) and others that children do learn to spell many words by analogy and unrefined generalization, it would seem advisable to direct and guide this tendency to generalization and transfer by teaching rules, provided that these can be justified on the bases of frequent application, infrequent exception, and clarity.

The grade placement of the following rules is based on the data of Gates (14) and King (26). The phraseology is based on the study of Wheat (48). The grade placements indicated are those where, according to Gates and King, more than 50 per cent of the children were able to apply and state the rule after being taught it.

1. In Grades 3-4—The plural of most nouns is formed by adding *s* to the singular.
2. In Grade 5—Words ending in silent *e* drop the *e* when adding a suffix beginning with a vowel and keep the *e* when adding a suffix beginning with a consonant.
3. In Grades 5-6—Words ending in *y* preceded by a consonant change the *y* to *i* when adding any suffix except one beginning with *i*. Words ending in *y* preceded by a vowel retain the *y* when adding any suffix.
4. In Grade 5—In diphthongs (in the same syllable) *i* before *e* except after *c* or

when sounded like *a*, as in *neighbor* and *weigh*.

5. In Grade 6—Monosyllables or words accented on the last syllable ending in a single consonant preceded by a single vowel, double the final consonant when adding a suffix beginning with a vowel.

6. *Reviews*. "The major emphasis should be placed upon the adequate teaching of spelling rather than on elaborate methods of reviewing to compensate for inferior instruction," according to Foran (10). Reviewing of words must be determined on the basis of individual words rather than upon some complicated system. This is shown in the fact that Woody's data (51) and those of Curtis and Dolch (7) suggest that there is much greater retention of words whose spelling has been well taught than is commonly supposed. The same studies show that certain words are apparently never learned by the lowest quarter of the class, even thought taught and reviewed.

One method of determining the words necessitating review is to use those words missed by 25 per cent or more of the class on the final test of the week. Review these words by re-teaching, i.e. representing them the following Wednesday. Another method of review is the use of a misspelled word list kept by the individual pupil.

7. *Stressing of misspelled words*. Words misspelled by the majority of the class certainly warrant reviewing and re-teaching. In the earlier discussion of reviews, we have indicated a criterion of selection for words necessitating review. Stressing of these words by writing them on the board, discussing their hard spots (as evidenced by the specific errors of the class), asking children why they think they misspelled the words, or how they misspelled them, etc. is probably of some value. Marking misspelled words and indicating the correct spelling, then return-

ing the words for individual study is helpful according to Wyatt (52) and Richardson (36). Marking misspelled words on compositions, etc. without indicating the correct spelling or insuring individual study is of no value according to Brandenburg (4).

8. *List or modified sentence tests*. The validity of a spelling test, or the extent to which it actually tests spelling, varies with the form of the test. Recognition tests and those in which misspelled words are found in a story are the most unsatisfactory of all (11). The list or column form, the modified sentence and the sentence forms yield quite similar results, with the exception that the last tends to result in lower average scores. The loss in accuracy is about 10 per cent when spelling in context or sentences (19, 24, 29, 42). As used here, the modified sentence test is one in which the examiner pronounces the word, uses it in an illustrative sentence, then says the word again. The children write only the test word.

On the basis of facility of administration, time and freedom from ambiguities of meaning and pronunciation, the modified sentence type of test seems superior to most other forms (11.)

9. *Use of the dictionary*. The problems of when and how to teach the use of the dictionary are still unsolved. Practically all authorities agree that such teaching is necessary, but few agree as to the methods or grade placement of topics. The consensus of opinion, as gathered by Dolch (8), indicates that the fourth grade should probably begin the study of the use of the dictionary. Appropriate exercises and preparatory steps are described in a later section of this article.

10. *Games and similar devices*. As in teaching of other subjects, novel means of presentation aid in promoting and motivating learning. Flash cards (16), lan-

tern projection (53) and various games have been found helpful. Gates and Graham (15) found that a variety of games and activities produced as great spelling efficiency as either the test-study or study-test methods. It is not evident whether the successful use of these aids was due to their novelty or their intrinsic pedagogical soundness.

B-1. *Oral spelling.* All authorities are agreed that the ultimate purpose of the teaching of spelling is the correct use of words in written intercourse. For this reason, the use of oral spelling is to be distinctly limited since it may hinder the accuracy of written spelling by making children dependent upon oral images or impressions.

2. *List versus context presentation.* Teaching words in sentences does not give equal spelling efficiency to that obtained by teaching words individually, even when measured by the correct spelling of the same words in sentences. Individual presentation and study of each word is much more effective (17, 19, 30). Alternating occasionally between study of lists of words and words in sentences is probably better than constant use of either alone, according to Zyve (53).

3. *"Hard spots."* There is ample experimental evidence to indicate that the marking of "hard spots" in words by underlining, colored chalk, encircling, etc. is of little or no value in decreasing errors (34, 37, 44). The types of misspellings tend to become more alike as the grade advances; however, the similarity is not sufficient to permit the teacher to presume that certain portions constitute the "hard spots" for any particular class, without careful checking of individual papers.

4. *Sources of additional spelling words.* There are some who may believe that the teaching of spelling words as the need apparently arises in conjunction with

other subject matter is more desirable than the teaching of a pre-determined spelling list. The major objection to spelling words selected on the basis of apparent (and often temporary need) is that these words are frequently not suitable in terms of permanent value, grade placement, value for present or future usage or frequency of occurrence.

II. Instructions to Pupils

1. *Methods of study.* Although they have not been experimentally validated, the following steps in learning a word are most widely used (22):

- a. Pronounce word correctly
- b. Close eyes, recall how word looks, pronounce in syllables
- c. Open eyes, look at word, say it clearly
- d. Close eyes, repeat word, spelling in syllables
- e. Open eyes and check spelling
- f. Write word (without looking at sample)
- g. Check with correct form
- h. If correct, write word two or three times
- i. If incorrect, repeat steps a-g.

2. *Misspelled word list.* A speller should instruct the child in the use of an individual misspelled word list. He should be urged to study these words and to secure the co-operation of a parent or another child in testing him on the words. This list should be drawn from the words misspelled on the initial and final tests of each week. Thus each child knows exactly which words necessitate his study or review. The list should be permanent and cumulative in order that the teacher may determine from time to time whether the child has mastered these words.

3. *Syllabication.* A speller probably should include some such principles as the following to aid the child in understanding and using syllabication: (47)

- a. Every syllable contains a vowel.
- b. The members of a compound word, which are themselves English words

with meanings unchanged in the compound, are separated in syllabication.

- c. Two or more letters, when they represent a diphthong (*oi, ou, etc.*) or form a single sound (*ai, ea, eau, th, sh, etc.*) are not separated.
- d. Two vowels coming together and sounded separately belong to separate syllables, as *sci-ence*.
- e. Prefixes and suffixes are separated from the body of the word, as *pre-cede, sweet-er*. When the adding of the suffix causes the doubling of the final consonant, the added consonant goes with the suffix, as *glad-den*.
- f. A single consonant between two sounded vowels is joined to the second vowel, as *fa-vor*, unless the preceding vowel is short and accented, as *hab-it*, or the consonant belongs to a prefix, as *im-agine*.

4. *Use of the dictionary.* The speller should provide such aids to the use of the dictionary as key words illustrating the influence of various diacritical marks, a sample page from a dictionary, and practice exercises in actual use.

III. Vocabulary

1. *Selection.* The selection of the spelling vocabulary should be made from words commonly found in the writing of adults and children or combinations of these. It is not yet clear whether one of these sources should be given greater weight than the other. But since the two sources are found to overlap considerably, a vocabulary based on either or both sources is probably satisfactory for the great majority of its words.

2. *Grade placement.* Undoubtedly the grade placement of words should be determined by their difficulty and the need for them as evidenced by their frequency of occurrence in child usage. Just how these two factors may be combined satisfactorily has not been determined as yet. The lack of agreement in grade placement of words is evidenced in any survey of a number of spellers (49). The pres-

ent writer has no panacea for this situation.

3. *Total vocabulary.* The learning of 3000-5000 words is probably sufficient for adult spelling needs. Actually, adults use many fewer words in daily life, according to the evidence of Breed (5) and Tidyman (41).

4. *Number per lesson.* Two words per day in second grade increasing to about four words daily in the eighth grade are sufficient to cover the average basal spelling vocabulary. Foran (10) has computed that if the vocabulary consists of about 4000 words, the average number of words to be learned each week is less than fourteen.

IV. Format and Arrangement

A-1-2. *Test.* Since the test-study method is to be recommended and employed, the speller should contain spaces for the initial and final tests of this method.

3. *Individualized study and activities.* Space should be provided in the pages of each week's lesson for the pupil's individual study of his misspelled words. In addition, exercises in using words in meaningful relationships, defining words, finding synonyms and antonyms and practice in identifying words should be present. A review of seventeen spellers current in 1935 (46) disclosed that the average included 276 such exercises. The exercises were largely those of the use of words in meaningful relationships and practice in identifying words. As Waterman and Melbo (46) point out, the number of exercises is no guaranty of their value. Many were of questionable educational value. Others were primarily "busy work." Other undesirable types are those of crossing out silent letters and attempting to insure understanding of the meanings of words by writing them in sentences (46). The teacher must deter-

mine by experiment whether the exercises present a vocabulary or mechanical difficulty that is too great for the grade for which the book is apparently intended.

4. *Teacher-directed study.* The speller should provide space in the pages of each week's lesson for the activities occurring in teacher-directed study of the lesson. Under the test-study method, space for the writing of the words two or three times each would be sufficient.

5. *Misspelled word list.* In addition to the directions for its use described above, the speller should provide a definite place for the child's misspelled word list. There should be constant reference to the use of this list, probably in the form of footnotes in the space intended for the initial and final tests.

B.-1. *Grouping words.* Teaching related words at the same time gives superior results to non-grouping, if desirable types of grouping are used. Grouping by common structure, i.e. prefixes, suffixes and stems has been found useful. Grouping by phonic elements or syllables is helpful even with duller classes. It tends to improve the ability to recognize and apply phonic generalizations, according to Gates (14). Grouping words according to common difficulty in spelling, as *ie* words, is more effective than non-grouping according to Wagner (45), Tidyman and Johnson (43) and Schweiring (39). Grouping words by associated meaning and use, as in teaching all the words related to a particular topic, is debatable. In the opinion of some, such grouping may promote accidental, random associations which interfere with spelling efficiency.

2. *List and context presentation.* As indicated above, the use of context presentation, i.e. words in a series of related sentences, may prove helpful. Such pre-

sentation should not be used in place of the individual study of each word. Its value is probably that of a supplementary aid.

3. *Homonyms.* The evidence on the teaching of homonyms is somewhat conflicting. Pearson's results (32, 33) favored teaching such words separately. Finkenbinder (9) felt that they should be taught separately. Foran (10) concludes that unless the words occur in the same grade they should probably be taught separately. When the second of a pair occurs, the first should probably be reviewed. Foran believes that devices for distinguishing or remembering the words probably entail more trouble than carefully teaching their spelling, meaning and use (10, p. 61).

C.-1. *Use of the dictionary.* The following exercises are recommended (1, 8) as preparatory steps in the use of the dictionary:

- a. Learning the alphabet
- b. Practice in finding words in alphabetical lists using only the first letter
- c. Practice in arranging words alphabetically, considering only the first or first two letters
- d. Practice in making own dictionary from misspelled word list or similar source
- e. Practice in finding words, considering the first three letters
- f. Practice in finding useful or best definitions
- g. Practice in using an unabridged dictionary
- h. Practice in finding synonyms and antonyms

Since use of the dictionary implies knowledge of the significance of diacritical marks, the following suggestions are offered (1):

1. Teach accent and how to indicate accent
2. Teach long and short sounds of vowels
3. Practice in arranging words according to sounds
4. Practice in pronouncing words marked by macron and breve

5. Practice in marking long and short vowels

2. *Dictionary.* Several of the later spellers have provided a dictionary of the words included in their spelling vocabulary. Although this is not an absolutely necessary feature, it is an economical and desirable one, provided the section conforms to the standards for children's dictionaries.

3. *Other exercises.* Suitable types of exercises intended to supplement the actual spelling lesson have been described in the preceding section on individualized study and activities.

Other textbook characteristics for which standards might be offered are those of physical construction, durability, typography, paper, illustrations, etc. Inspection of the average textbook of recent copyright date reveals however, that American texts are, generally speaking, quite acceptable in these respects. It is not necessary to give detailed criteria for these characteristics here. In view of the general excellence of American texts, these physical characteristics are usually of minor importance in the selection of a spelling textbook.

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The Value Of Word-Counts*

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THE MEMBERS OF THE Committee¹ are to be congratulated upon their work. It rates high for thoroughness. I regret the omission of any description of Skinner's work, of Grinstead's work for the Classical Enquiry, or of the Bell Laboratories count of telephone conversations, but admire the zeal which has found and read over two hundred unpublished reports. It rates high for impartiality. If the three authors have any pet theories these are not intruded. It rates high for serviceability. The summarizing statement² will form an excellent basis for anyone's thinking about the pedagogy of vocabulary.

I have minor suggestions which may be of service if an extension of the report is printed in ten years or so, as I hope it will be. Would it not be helpful if the length of each article were stated? And if the references were specific, not such as "the Thorndike Word List" which could be one of 10,000 words or one of 20,000? And if more of the significant quantitative determinations were included?

But my duty is not to pass judgment on the work of the Committee, but rather upon the work which it summarizes, 262 items including many long and formidable books and monographs. I shall try to make comments which will be helpful to both students of what has been done and workers trying to do something more.

In connection with the article by Jones (112)³ it is well to note that the labor

* Critique of The Seventh Annual Research Bulletin of The National Conference on Research in English.

¹ J. C. Seegers, Chairman; E. W. Dolch, M. R. Trabue.

² See the January, 1940 number of *The Review*.

³ Parenthetical numbers refer to items in the bibliography. See the April, 1939, *Review*.

of making a count of 15,000,000 running words in handwriting classified into 1050 separate counts of approximately 15,000 words each and then selecting every word used by two or more per cent of pupils would require many years of labor, even of ten hours a day. Dr. Jones' spelling list was a useful contribution, in particular his list of a hundred very common words very often misspelled, but it seems probable that his description of the extent of his count is in error.

In connection with the summaries of investigations making small counts (of from 20,000 to 200,000 running words) whether spoken, written, or printed, it is prudent to discount the interpretations of discrepancies between the counts in question and counts of two million or more. The size of the sample may well explain many discrepancies. Discrepancies between the results of small counts are, of course, still more subject to the size of the samples.

It is regrettable that so many of the makers of counts have left so much of their data unpublished. Their conclusions often do not advance far beyond what general knowledge and wisdom would give, but the fact that certain words occurred only twice or once or not at all in the count might be very helpful to future students. The unpublished parts of counts should, I think, be collected in some center.

Limitations of what is counted in a certain group of books, letters, conversations, etc., except of items occurring so frequently that their frequency in the entire sample can be measured adequately from a part of it, are almost universal-

ly bad. I was myself perhaps the first sinner by omitting names of numbers appearing as 7, 49, 683 and the like, by permitting some compounds to be counted under their constituents, and by combining the records of forms in *s*, *ed*, *ing*, *ly*, etc. It seems especially unwise to omit slang, contractions, and names of persons and places from spelling counts. The slang, though of little value for spelling, is of very great value for studies of usage. So also are the contractions. Correct spelling of names of persons and places is of great importance because if a place-name is misspelled on an envelope the letter may never reach the person, and because a person feels notable irritation at seeing his name misspelled. To misspell a score of words in a letter to Miss Adams would probably not give her so poor an impression as to spell her name *Adems* or *Adums*. The usual policy of counting everything in a letter and nothing on the envelope seems especially perverse.

There seems to be some lack of consideration of general psychological and linguistic facts in the methods used to obtain lists of words. If one asks persons to say or write words called to mind by a given word, e.g., the word *dogs*, they will commonly respond with strings of single words (as in this case by *cat*, *horse*, *cow*, *back*, *run*, *play*, *Airedale*, *Scotty*, and the like) with very few prepositions, conjunctions, pronouns, or auxiliary verbs. But if one had asked the same persons to write or say what they knew or thought about dogs, the count would be full of these. If one asks persons to say or write as many words as they can think of in 10, or 20, or 30, or 60 minutes, the result will vary greatly with the mental set of the person at the time; will, except for a very few idiots, never represent either the words he uses most, or a random

sampling from all the words he uses, or any other one sort of sampling; and will be very hard to interpret safely. All such results should be checked by what persons of the sort in question do say or write in their actual lives, and by what words they comprehend when they see them, and in some cases, by what words they comprehend when they hear them.

It should be kept in mind that the difficulty of understanding a certain word in a certain context depends partly upon the nature of human minds and languages, but partly upon the training, including school training, which the person or persons in question have had. *If*, *though*, *because*, *but*, *God* and *soul* are difficult chiefly for the former reason; and so are *ratio*, *equation*, *inverse*, *correlative* and *justice*. *Agama*, *agrimony*, *alfileria*, *ani*, and other such names of animals and plants are difficult only in the latter sense. The percentages of understanding of a word grade by grade, or year by year, never, or almost never, inform us how much of its difficulty is of the former sort, and how much of the latter. But that is what we especially need to know, because the pedagogy of the two sorts is radically different, and because with different fashions in school education the percentages of understanding may change very widely so far as they are caused by "difficulty" of the second sort.

In the case of spelling the percentages of misspellings may confuse mere infrequency of experience of the word or slowness of attention paid to its spelling with spelling difficulty proper. *Was*, *been*, and *play* are probably harder to learn to spell than *ace*, *beck*, and *plash*, but would show a far smaller percentage of errors in the elementary school, and probably in high school. If, in either reading or spelling, difficulty is estimated by percentages of failure under the pres-

ent curricular conditions, and is then used as a criterion for changing the curriculum, we are reasoning in a circle.

Much work on vocabulary seems to be obsessed by the doctrine that there is some one set of words far better than any other set of equal size for children of a certain school grade to know how to use in speech or in writing; and some one set far better than any other for knowledge of meanings. Frankly, this is nonsense. Children of a certain school grade, from 1-A to college seniors, are, and despite more homogeneous grading will be, an extremely variable group, no two of whom perhaps will be most benefited by the same linguistic offering. And even if they were all absolutely identical in abilities, interests, and extra-school opportunities, a hundred different lists for knowledge of meanings, for use in speech and writing, and for spelling could be made which would differ only infinitesimally in merit. The truth of this is apparent if one asks which 15,000 words a college senior should know, or which 15 words a two-year-old baby should know. We can avoid gross blunders, and from intelligent use of more and better word counts can probably settle on a basic 90 per cent of what is most reasonable for a majority of the persons designated, but after that, many different options will be almost equally reasonable. Indeed, I am confident that a thousand lists (of equal length) for, say, grade eight could be made which would be so nearly indistinguishable in merit, that it would require a hundred million dollars worth of research to put them in a correct order of merit.

The zeal for grade placement is laudable, but I am haunted by the fear that some teachers who are conscientious, but underprivileged in respect of intellect, will actually prevent children from learn-

ing the meaning or spelling of certain words because these belong in the list for a later grade! I think lists for the school grades are receiving relatively too much attention. Is it not better to spend more of our energy in discovering relevant facts about words and word-learning, and less in trying to make perfect prescriptions about the order in which a school child shall learn to understand and use the English language.

The critical examination of the words used in textbooks has been profitable since the early work of Miller and Housh. Many of the hard or rare words used are, of course necessary or desirable, but many of them are unpardonable atrocities. Should not schoolmen insist that sellers of basic and supplementary books used to teach reading provide a list of at least all words outside the Thorndike first 2500, with the page location of each occurrence, and that sellers of elementary- and high-school textbooks of whatever sort supply an accurate list of the words outside the first Thorndike 2500, 5000, 7500 or 10000, according to the level of linguistic knowledge and ability of the ordinary expected users of the book? It would then be easier to observe whether the book had useless difficulties of vocabulary on the one hand, or, on the other hand, failed to teach the important technical terms and other words needed to learn the subject in question. The report supplies two choice bits of information along this line—that some of the adaptations of literary classics are harder to read than the originals and that the instructions printed on certain tests of vocabulary contain some very rare words and are extremely hard to understand!

On the whole, the recent work on word knowledge and word-learning seems to compare favorably with that in other fields of education. It is true that some

Observations on Vocabulary Problems*

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ONLY ONE WHO has tried, within the limitations of circumstances, to familiarize himself with the literature of vocabulary study, can appreciate the value of this document by Mr. Seegers and his collaborators. The thoroughness of their search, the penetration and understanding with which they have reduced this great mass of material to clear, pertinent, and easily read form, and the soundness of their interpretations, their applications, and their recommendations for further research are beyond an adequate expression of appreciation.

Also, the two hundred or more researchers whose results are here summarized deserve our gratitude. Their work is objective, discriminating, and pertinent, and is rarely misinterpreted by themselves. They almost invariably know and say what their results signify, and what they do not signify.

Vocabulary studies of course would be unimaginable except in what might be called a "book-and-school" civilization. For that is unquestionably the most apt characterization of our civilization. Man invented many fundamental things earlier than movable type, but nothing else that was followed by such swift and stupendous consequences: business, science, machines, individualism, research, and wealth beside which Ormus and Ind pale to the ineffectual fire of a burnt-out electric light bulb.

Our modern school is a "book" school, and of course this type of school had been invented and developed to a point of high efficiency before printing came. The modern production of wealth, however, by freeing all children from the necessity of earning their daily bread, has presented the "book" school with the second of two quite mutually antagonistic problems. The first problem has been and is, what to do with the "book-minded" (or "language-minded") child. The new problem is, what to do with the child who is not book-minded. Until recently our pedagogical predecessors had a simple solution for the second problem. They froze the non-book-minded pupil out of school as soon as possible. However, now that wealth has increased so greatly, we are not allowed to do that. In spite of some fumbling, half-unconscious efforts to get a good solution, for the most part we merely promote our non-book-minded pupils regularly until they get old enough to go to a trade school or a commercial high school or to work. In the meantime, we reduce the amount of book and language activity in the school to the minimum at which we can keep our self-respect. This is very bad, both for the book-minded pupil and for the non-book-minded pupil.

Even though these vocabulary studies do not directly attack the basic problem before us school teachers, they are a pre-essential to the attack and the solution.

*A critique of the Seventh Annual Research Bulletin of The National Conference on Research in English.

The language growth of both types of children has been largely unguided. It is time we began to try to guide it. Here we have a few data with which to begin to chart our course.

In some of these studies the researchers have shown us, however roughly or approximately, what are some of the verbal contents of the pupil's minds—though not what are the verbal contents of any individual pupil's mind, and not what are the contents of the book mind or the non-book mind. Some show us what words are met most frequently, even though they do not tell us which are the ones met by children. There are large gaps to be filled in, but the outlines can be discerned.

Mr. Seegers gives us many proposals for needed further work, and they are valuable and acute. But perhaps a few notes can be made on his suggestions. You will observe that I am interested in something more than the facts. At least as vital as the facts is the question, what are we teachers going to do with them?

1. In spite of the difficulties involved, we imperatively need information about individual children. The fact that there is wide variation among individuals is not a good reason for doing nothing. It is, on the contrary, a good reason for doing a great deal. Twenty or thirty "case" histories of child vocabularies, divided among as many kinds of children as possible, and each extending over two, three, four, or five years, would in my judgment open the way to important experiments in increasing the vocabularies of all children. The children serving as subjects should be chosen only partly on the basis of what we call intelligence. Some of them should be chosen to represent book-minded, and some to represent various types of non-book-minded children. If we may be permitted to form compounds freely, we should know what

happens, as well as what could happen under controlled conditions, to the vocabularies of children who are "hand-minded," "art-minded," "music-minded," "tool-minded," "machine-minded," "muscle-minded," and "deaf-and-dumb-and-blind-minded." And can apparently lazy or stolid children be stimulated into increasing their vocabularies? These researches should be tied up with some of the work being done in "remedial reading." Perhaps they will cause remedial reading to disappear because there will no longer be any need for it.

2. We know a little about the number of "new" words that children in general annually learn on some of the grade levels. We know very little about how many they could learn if they were taught with the direct purpose of increasing their vocabularies. A few of us have fumbled sporadically at methods in this direction. We know that stimulus, use, and repetition help. But we still have much to do. And is our curriculum organized to put even what we do know into practice?

3. While we should pay adequate attention to those who are not book-minded, we must not fail to pay some attention to those who *are* book-minded. Perhaps Child One would rather read *Popular Mechanics* than *Evangeline*. But that does not mean that Child Two, who would rather read *Evangeline*, must be deprived of *Evangeline* and compelled to read only *Popular Mechanics*. Even the minority ought to have a few privileges. Language is of course in part utilitarian. But it is also in part something more: it is a medium of art. And even stolid children should not be denied some contact with art.

In other words, in planning the reading through which ideas and words are

to be introduced to our children, we should give them some ideas and words which are more than good hewers of wood and drawers of water. Information and utility are important. But so are the emotions.

4. Above all, let us balk at books that contain only words already known to the children. Let us balk at the rewriting of good literature that aims at reducing its vocabulary to very thin gruel. Let us balk at books "written down" to children. All children should be given the chance to read at least a little good literature, written by skilled, successful, professional writers whose style has individuality and distinction. Remember that most of us learn new words only if we meet them, and that growth comes only from doing things that become gradually harder and harder.

5. Professor Thorndike is, I understand, working on the problem of "semantic" frequencies. There is no way of telling what research will be opened up if we begin to pay attention to words of multiple meaning. Here at least we shall need to do more than build up collections of mass statistics. Perhaps we can hope for some valuable "case" information.

6. We need more research into methods of instruction that will give children experience as well as words. The less intelligent children need experience to help increase their vocabularies. The more intelligent need it to prevent them from becoming mere verbalists. But, just as there are different kinds of words, so there are different kinds of experience. *Open-pit iron mine* means more if you go to Hibbing, Minn. The meaning of some abstract words like *essential*, and *consequence*, can be learned from experiences with concrete actions and objects. But the meaning of abstract words like *fact*, *circumspect*, *contingent*, *world*, and

universe, can be learned best only by meeting them with some frequency in context and also getting a good definition.

7. Mr. Seegers and his collaborators properly emphasize the danger that lies in misunderstanding, misinterpreting, and misapplying the materials contained in vocabulary studies.

What for example, is the educational significance of the fact that we have a count of the most "frequent" twenty thousand words in ten million running words of selected and weighted printed material? What is the significance of the ten thousand most "frequent" words in five million running words of correspondence? A lot of false inferences have been drawn from these facts. Not all of the most frequent five thousand words are known to children. Some of these frequent words are among the most difficult to understand or define. It is positively dangerous to use some of them in definitions written for children. We must be as careful as the researchers—as careful, critical, and responsible, and not naïve and gullible, in using these results.

8. And even ten million running words are not very many. There are about ten million running words in fifty numbers of the *Saturday Evening Post*, fifty numbers of the *Readers Digest*, and thirty ordinary books.

9. It is important to know what are the five, ten, or twenty thousand most frequent words in a selected body of material, but it is at least equally important to know what are the forty thousand "less frequent" words in the material.

Whether or not there ought to be, there are actually about sixty thousand different words printed in the books, magazines, and newspapers that are read by children at or below the sixth grade level. All of the fifty thousand "low-

frequency" words need to be listed, subjected to a tested arrangement, and brought into contact with the pupils on an ascending scale.

10. Many of these studies reveal a large number of peculiarly children's words. Others mingle adult words and child words without discrimination. We need to know which are child words, which are adult words, and which are both child and adult words.

11. We need some research on dictionaries and their use. In spite of the revolutionary dictionaries published for children during the past few years, the last word in such dictionaries has not been said. Even better ones can be and will be edited and published.

A necessary preliminary will be more nearly adequate information about what kinds of definitions can be understood by at least 85 per cent of the children at certain grade levels—say the fourth, sixth, ninth, and twelfth.

We have begun to try to find out which words we can safely use in definitions in children's dictionaries. We need to know more.

Under pressure for space and the desire for accuracy, definitions are now written according to certain structural formulas. Are they the best formulas from the child's point of view? These formulas have a great deal of flexibility, and can be varied within certain limits, but it would be interesting if a good professional dictionary editor with plenty of original ideas could be endowed for three or four years so that he (or she) could live in an elementary school room and invent and try out and perfect a large number of new and better formulas.

We need to know more about which words need to be defined at each grade level. And—here is a fairly radical idea—could we safely omit several hun-

dred or a thousand common and easy words that the children already know perfectly well? Would a dictionary of "hard" words pay?

Will it ever become possible to get the buyers of dictionaries to pay a price high enough to enable the producers to edit and publish even better ones? At a twenty per cent increase in price you could get a dictionary one hundred per cent more valuable for the children.

What research is going on in the methods of using dictionaries? I know, of course, that in some well-managed school systems children are taught "how to use the dictionary." I have even seen elementary-school classes using their dictionaries. I have also seen a few pamphlets that give some instruction. But what experiments are going on that will show better methods, or perhaps the best methods?

12. A publisher deserves commendation if he refuses to publish a book in a special subject like arithmetic or grammar when the author has invented a vocabulary that consists of new words for the same old things.

13. Efforts have been made to find the minimum English vocabulary with which one could "get by." There is even an argument to the effect that we would all be better off if we restricted our vocabulary to eight hundred or twelve hundred rigidly defined words. And several pieces of ingenious, juiceless, and unidiomatic writing have been composed in order to demonstrate that twelve hundred words are enough.

I do not endorse this argument, though lists of a few hundred common words are of the utmost value if you are trying to teach English to foreigners. It is one thing to teach twelve hundred words *first*, with the warning that they form only the first installment. But I am cer-

tain that twelve hundred words are not enough for me to convey my ideas the way I want them to be conveyed. And, if greater certainty is possible, I am even more certain that twelve hundred words are not enough to enable a fourth-grade pupil to read all the books, magazines, and newspapers he ought to read if he is to be a normal, functioning citizen in his adulthood.

14. Although the study of a foreign language does not usually fall to the lot of elementary-school pupils, I cannot resist the inclination to say something about this matter. I don't know what would be demonstrated by "scientific measurement," but I am absolutely sure that the increase of my own vocabulary was greatly facilitated by my early study of Latin and Greek, and my subsequent study of French. Ten per cent of the words on a page are usually loan-words from one of these three languages, and perhaps fifty per cent of the "hard" words. If vocabulary increase is what you are after, no greater calamity could have happened than the iconoclastic removal of compulsory Latin and elective Greek from our school curriculum. This is only a personal opinion, but I record it for what it may be worth.

15. As for our present implements for testing and measuring, somebody ought

to insist on an honest answer to the question, Do they test or measure adequately what we are trying to test or measure? And if the answer is no, isn't it high time we did something about it? If our present "intelligence" test is only a test of book-mindedness or language-mindedness, then, as far as half of our children are concerned, we are not measuring them at all. We might as well try to measure five gallons of gasoline with a thermometer.

16. We should try more measured experiments with reading aloud, both by pupils and teachers. Questions by both pupils and teachers about the meaning of paragraphs, sentences, phrases, and words ought to increase the vocabulary. Why not try measuring the increase, and experimenting to find the best material to read and the best methods of discussing and questioning it?

In these notes I have not wandered from our subject, and I have not been a mere bull in a china shop. Some of the further research I suggest may already be under way, but no outsider like me can keep up with all you are doing. I believe wholly in what you are trying to do, and, if you will reread carefully what I have said, you will see that, within my limitations, I am trying to help you all I can.

THE VALUE OF WORD-COUNTS

(Continued from page 62)

of the conclusions quoted are in error and that others do little more than reiterate what could be postulated from the general facts of psychology and linguistic science. But it is also true that as a result of word counts of various sorts,

measurements of word knowledge, and its affiliations, and experiments in teaching word meanings and spellings, we have a much fuller and more accurate knowledge of the pedagogy of vocabulary than we had fifteen or twenty years ago.

Guiding Vocabulary Development in the Kindergarten

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IF YOU JUST color a light course, it will look light. Like a light case of measles." Thus spoke a five-year-old child to her little friend as they were drawing.

It sounded like a puzzle. My imagination was captured. What does she mean? Just what was this child's understanding of the words she was using? How did she happen to choose them? These were the questions that came to my mind as I overheard the conversation between the two children. What could I do about it to help clarify this child's meanings of the symbols used?

Kindergarten children are constantly exposed to new situations. Many of them are entering school for the first time, which means that they are meeting a larger and more complex social environment. These children must be able to make themselves understood in this new environment and so must be able to express themselves adequately. Only when a child can project himself into an experience, can he take meaning for himself, and he can give back that meaning only when he is able to incorporate it into his oral expression.

By experimenting with certain methods to see which ones offered the best opportunities for developing meanings and concepts, I attempted to determine the factors that might contribute to the development and growth of the vocabulary of children of kindergarten age.

The children to be used in this study were unselected; they were those enrolled in a kindergarten in the Wilmette Public

Schools. The group consisted of thirty-two children, eighteen boys and fourteen girls. Their chronological ages ranged from five years, four months to six years, two months. Their mental ages were not known. Physiologically, they were normal, and socially, they represented well-educated parents.

The method of observation seemed to be the most advantageous way of obtaining material with which to work. During nine weeks' time, records were made of childrens' language used in the normal kindergarten environment, consisting of the free activity period, group discussions, stories, dramatizations, songs and rhythms, and excursions. The length of time devoted to observation averaged sixty minutes a day which was distributed among the different situations.

For purposes of analysis, the records of this spontaneous conversation were classified according to the following categories: a list of the entire vocabulary spoken, the number of themes that were discussed, and the character of the sentences used. Further analysis of the vocabulary showed that the words comprehensible to the children included names of objects, action words easily visualized, and words of mental state or condition. The words that were incomprehensible to the children were names of objects.

One illustration of how curiosity was guided to bring new meaning and better understanding to the children, was a trip to a greenhouse. The time was just before Easter, and the purpose of the trip was to buy spring plants and flowers for

the kindergarten room for the celebration of the Easter festival. The children had expressed a wish to see the plants and flowers growing, so it was decided to visit a greenhouse rather than a florist shop. Before making the trip, a short informal conversation period was arranged in order to talk about the nature of the place to be visited. In this discussion, it became known that some children did not know the meaning of the word "greenhouse." Other children were asked to explain the meaning of the word and the explanations best understood were as follows: "A greenhouse is a place to plant flowers." "It is made of glass to keep flowers cool." "It is made of glass so the flowers get the sun."

The school bus was used to make the trip to the greenhouse. While riding, the conversation was naturally very informal. No attempt was made to follow an organized train of thought, but at the greenhouse, such comments as these were recorded: "Look at the big plants," "Don't touch them or they won't grow," "See those two plants, they're sprouting."

The next day another group conversation period was planned in order to tell about the trip for the benefit of some children who had not taken it. The accounts brought back were: "When I went to the greenhouse, I saw some little leaves growing." "Well, when I was walking along in the greenhouse, I saw a plant like Chuck has." "I think I saw a great big flower pot in the greenhouse and it had lots of flowers in it." It was mentioned that someone said he had seen some plants sprouting. A discussion of the word "sprouting" then took place. This conversation was guided, by asking as many children as could, to tell the meaning of "sprouting." Attention was called to some sweet potatoes growing in the room and it was recalled that, when

they started to grow, the roots sprouted first. The meaning (given by a child) of this new word that seemed to convey an understanding was: "'sprouting' means that a flower is just beginning to grow." It was not necessary to discuss again the meaning of the word "greenhouse," as it had become functional.

Another activity that helped to enrich the vocabulary, was the use of pictures as a mode of expression. Drawing, for the kindergarten child, is a form of language which is expressive of his ideas. The children had free access to the blackboard and chalk, paper, paints, and crayons. As pictures were completed, they were hung on the walls or held by children to show at group discussion periods. They often depicted interesting experiences taken from community life, excursions, or some project under way. Naturally, as a child exhibited his picture, he was anxious to talk about it and just as naturally, questions were asked about it.

One boy made a drawing of a boat at the time that a boat was being constructed in the room. The object in the picture that was of vital interest to him was the crow's nest which he had made very large and prominent. He pointed to it to show that he knew something about it and said, "This is the crow's nest, you know, where the men go up near the chimney to look out to see if there are icebergs." Someone remembered that there was a picture of the same thing in one of the picture books. A child went for the book and showed the picture to the group. This conversation led to a further discussion of boats and special features about them.

Dramatic play is fun in the kindergarten. It is spontaneous and is a means by which children express life situations as they know them.

One morning, five children were playing house in the doll corner with a few dolls and some pieces of doll furniture. The conversation was not related to any particular activity. Some of it was a monologue and some dialogue. A boy had brought a bedspread from home and put it on the bed that the children had made. In so doing he asked, "How do you like that bedspread I brought?" This question received no answer. The same boy spoke again and said, "Mother, get this dust out of the way," and to another child remarked, "I'll get after her with the whiskbroom." A child sitting on the floor kept repeating, "rag-bag, rag-bag." Then a boy said to the girl who was the mother, "You be here after a while and you can collect them." She answered by saying, "What do you mean by 'collect them'?" He replied, "You know, when I finish you get them." The word "collect" was recorded as a new one.

This dramatic play showed that the language expression was rather hit-and-miss in thought. Perhaps if the toys in the doll corner had been selected with more care so that there would have been enough large furniture for the children to use, there might have been a more complete interpretation and organization of experience.

Besides these situations cited, there were other activities involving the use of language that helped to enrich the vocabulary. Songs, story-telling, and games, all stimulated oral expression.

An analysis of the observations made indicated the following findings. The entire vocabulary used as the basis of my analysis was 398 words. About 93 per cent of the words used were found to be comprehensible, while 7 per cent were incomprehensible. The percentage of comprehensible words that were classified

as action words easily visualized was 13.7; the percentage classified as words of mental state and condition was 11.9; and the percentage classified as names of objects was 74.4.

The themes were classified according to the circumstances in which a child was speaking. If he were talking in a casual and friendly manner to only one or two persons, it was analyzed as individual conversation, and if he were talking to a group participating in some group discussion, it was analyzed as social conversation.

Individually, there were 462 sentences spoken. About 25 per cent of the themes discussed were about self; 13.2 per cent about the family; 20.1 per cent about toys; 35.3 per cent about play; and 7.2 per cent about trips.

Socially, there were 272 sentences spoken. About 16 per cent of these themes were about vivid experiences, (seeing the movie "Snow White and the Seven Dwarfs"); 56.6 per cent were explanations and interpretations; 18.5 per cent were about excursions; and 10.6 per cent about work done by the group.

As to the character of the sentences used, the majority of them were complete in thought; 80.1 per cent were such. The percentage of those that could be termed as statements was 8.6, and of those that were questions, 14.2.

In summarizing these findings, it is evident that freedom of play and informal environment are conducive to spontaneous vocal expression. Therefore, these situations should be stressed in every kindergarten child's experience. They should provide a wealth of interesting experiences in which the child can participate.

If children are to develop a meaningful speaking vocabulary, necessary in life situations, they must have first-hand per-

The Development of Meaning Vocabularies with Special Reference to Reading*

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THROUGHOUT THE 1939 *Bulletin* of The National Conference on Research in English, Dr. Seegers attaches large significance to the meaning vocabularies of pupils. The practical value of such a vocabulary is obvious. It is an essential means of exchanging ideas and of acquiring new experiences indirectly. Unless children attach clear, accurate meanings to words, their oral and written language is often incorrect and ineffective. Furthermore, they are unable to acquire readily, either through listening or reading, new ideas which school activities and social contacts may contribute. This is true even when the words relate to situations, events or things which are very familiar. The need for a rich meaning vocabulary becomes increasingly evident as the ideas, concepts, and information involved depart from the everyday experiences and language activities of children.

But an adequate meaning vocabulary has far broader implications than those to which reference has been made. According to psychologists it exerts a profound influence on the intellectual life of an individual or a race. As a result of early research in this field Wundt and others secured evidence which shows that the development of speech and thought has always been coincident. In other words, man's growth in ideas has always been accompanied by a corresponding expansion in vocabulary. Through a

*Critique of the Seventh Annual Research Bulletin of The National Conference on Research in English.

rich heritage of words man is now heir to the accumulated experiences and thought of the ages. Insofar as meanings are clearly grasped, words relate the mental life of the listener or reader to the thinking of the race.

In view of these facts, how large a vocabulary is necessary to insure a clear grasp of meaning when reading? According to Professor Thorndike, the requirement differs for children of various abilities and interests at the respective grade levels. He estimates, for example, that it varies from 5,000 to 11,000 words by the end of the sixth grade and from 10,000 to 25,000 by the end of the ninth grade. Assuming a meaning vocabulary of from one to two thousand words when pupils enter the first grade, his estimate implies that the increase during the first six grades should vary on the average from about 700 to 1500 words per grade and during each of the next three grades it should vary from about 1700 to 4500 words. These estimates appear to be quite conservative in the light of the extended vocabularies which pupils encounter in juvenile literature, textbooks and other sources of information. The statement should be added that the size of the vocabulary needed is far greater today than formerly. This is due in part to the fact that school curriculums have been greatly enriched during recent years and the variety of the experiences provided has been greatly extended. Furthermore, all the evidence

available indicates that the requirement will continue to increase in the immediate future. It follows that the mastery of an adequate meaning vocabulary is a major educational achievement.

Although the importance of a large meaning vocabulary is widely recognized, Dr. Seegers found only a limited number of studies which are of practical value in promoting vocabulary growth. He rightly points out that one of the most productive fields for research in the immediate future relates to methods of enlarging and enriching the meaning vocabularies of pupils. He further indicates the nature of some of the problems that merit intensive study by quoting a series of questions proposed by Dora V. Smith:

What is the relationship of growth in language power to the child's background of experience? If words are truly to become symbols of meaning, what is the best approach to the deepening and extending of meaning for the individual child? Is it wider experience, is it increased reading on varied subjects of interest, is it more life and activity in the classroom, or is it more drills upon set language forms? How far should such enrichment be substituted for exercises in vocabulary building? On the other hand, to what extent are such exercises necessary to the refinement of concepts and the development of exactness in shades of meaning?

Such problems provide abundant stimulus for carefully planned inquiry in classrooms and for research in laboratories concerning the nature of meaning and the factors that influence its development.

Although the need for additional research is very great, Dr. Seegers' report shows that much is already known that can be used in promoting vocabulary growth. Indeed, classroom practice today lags far behind good procedure, as determined by the experience of expert teachers and the results of the experimental studies that have been reported thus far. It seems advisable, therefore, to consider in subsequent sections of this paper the implications of some of the facts which are known concerning the nature and sources of meaning, the rate of growth or progress in acquiring meaning vocabulary, the factors or conditions

that influence its development, and the methods that can be used to advantage in enlarging meaning vocabularies with special reference to reading.

The Nature of Meaning

The first fact that should be emphasized is that early meanings arise out of personal experiences. As pointed out by Brooks,¹ a child acquires his first understanding of the things about him by seeing, hearing, feeling, tasting or manipulating them in various ways. The meanings which he derives are not manufactured for him as are his clothes and toys. On the other hand, he must acquire them through his own active responses to his environment. Thus, "by rolling an object," says Dewey,² "the child makes its roundness appreciable; by bouncing it, he singles out its elasticity; by throwing it, he makes weight its conspicuous, distinctive factor." Sooner or later the meanings derived from these experiences are associated with spoken words.

A second fact that merits emphasis is that meanings not only arise out of experiences, but may be enlarged and clarified through subsequent activities. This is well illustrated in the growth of the concept *pony* or *nest* as the child becomes acquainted with many ponies or nests differing in significant respects. Likewise, the concept *round* may be clarified through a series of experiences, such as inflating balloons, riding on a merry-go-round, proving that if a plane intersects a sphere, the intersection is a circle. Or the concept may be extended by going the round of the milk route, participating in a round-robin letter, rounding decimals, and engaging in vocal exercises to secure a round tone. Unfortunately, pupils often take part in activities without recognizing the new aspects of meaning inherent in them. Furthermore, they

¹Fowler D. Brooks. *The Applied Psychology of Reading*, pp. 56-57. New York: D. Appleton and Co., 1926.

²John Dewey. *How We Think*, p. 112. Boston: D. C. Heath and Co., 1910.

fail to note the wide variations in meaning that attach to specific words. Good teaching not only provides experiences that enlarge meanings but also directs the learner's attention to the additions to or variations from the meanings previously acquired.

A third fact that must be kept clearly in mind is that many meanings are in reality generalizations that do not have specific referents in the physical world, for example, truth, rights, power, law, civilization. Such words represent more or less complicated sets of ideas and feelings that are difficult to represent concretely. The farther a concept is removed from the realm of immediate experience, the more largely must we rely on language in acquiring its meaning. All too frequently the words used in developing certain concepts with children are relatively new and unfamiliar to them. They fail, therefore, to grasp the new meanings presented. Furthermore, their effort to use words representing general or abstract meanings results, as a rule, in sheer verbalism. The solution does not lie in eliminating such words from the curriculum, but in acquiring greater skill in associating meaning with them. In this connection the teacher should study carefully the previous experiences of the learner and identify the new information and explanations necessary to insure a clear grasp of meaning. The fact should also be remembered that the meanings of general and abstract terms are acquired slowly as occasion demands rather than completely and fully at any given period.

A fourth fact of large significance is that the meanings of words vary to a considerable extent with the contexts in which they are used. For example, the word *struck* has quite different connotations in the sentences, "The clock struck

one," and "Mr. Brown struck the keynote of the campaign in his speech." In listening or reading it is necessary to grasp the essential ideas in each sentence as a whole before reaching conclusions concerning the meaning implied by the word *struck*. It often happens that the stock of meanings previously acquired does not include those implied by the sentences in which particular words are used. In the effort to grasp the ideas presented a listener or reader may attach to certain words new meanings which are suggested by the context. As soon as pupils acquire the art of deriving meanings in this way, the sentences which they hear and read become important sources in enriching their meaning vocabularies.

The discussion thus far indicates that the meanings of words may be derived in various ways, that they are much more difficult to grasp in some cases than in others, and that the meanings of words vary to a greater or less extent with the context in which they are used. It may prove helpful to consider next certain facts concerning the rate of growth in meaning vocabulary.

Growth in Meaning Vocabularies

In one of the early studies in this field, Chambers³ secured from approximately three thousand children and young people, who varied from five to twenty-seven years of age, answers to the question, "What do we mean by the word *monk*, *peasant*, *armor*, *nation*, *school*?" An analysis of the answers showed that they could be classified readily under four heads: no answer; wholly wrong answers; vaguely right; correct. When the data relating to the different words were compared it was found that they differed radically. Whereas, for example, 96 per cent of the five and six year old pupils were unable to give a meaning for

³Will Grant Chambers. "How Words Get Meaning," *Pedagogical Seminary*, XI (March, 1904), 30-50.

the word *monk*, only 18 per cent failed on the word *school*. Somewhat unexpectedly, the percentage of "no answers" for *school* increased during the seventh and eighth years due to a "growing consciousness of inability to adequately express a familiar meaning."

The record of "wrong answers" for *monk* shows that a large percentage of the pupils between the ages of six and ten had associated a wrong idea with it. An analysis of all the evidence available led to the conclusion that the "wrong answer" tendency is "intermediate in the evolution of the concept between no content and a correct content." This does not mean that a pupil always attaches a wrong meaning to a word before securing the right one. Indeed, many new meanings are mastered directly.

The data showed also that "vaguely right" and "correct" answers followed radically different courses of development for the various words in the test. For example, the word *school* was fairly familiar from the beginning and the vague answers concerning its meaning were rapidly eliminated. The word *monk* on the other hand, was largely unknown at first and more or less remote from the average child's experience. It, therefore, called forth vague answers from more children and for a longer period of time. Beyond the age of twelve the number of correct answers increased rapidly. In concluding his report, Chambers emphasized the fact that few if any concepts come to the child perfected. "It is for the teacher knowing how meanings grow, to discover the extent to which the content of the word is obscured for each child, and to devise the best means of bringing that word into the area of clear vision."

A critical review of the findings of various studies referred to by Dr. Seegers leads to the conclusion that the meanings

of words are acquired slowly, as a rule; that some are learned relatively early and others late in the school life of the child; and that pupils differ widely in the rate at which they acquire meanings. In general, however, the period from nine to fifteen is particularly productive in the acquisition of clear, accurate meanings. The statement should be added that the meanings which pupils attach to words vary conspicuously in richness and clarity at a given grade level and their character changes notably with increasing maturity. Obviously, the responsibilities of a teacher at any grade level vary all the way from correcting and clarifying the meanings of very simple words for some pupils to the enrichment, for other pupils, of the meanings of relatively difficult words. Intermediate between these two extremes lies the major problem of helping all pupils secure clear, vivid meanings for the essential or key words used in each unit of the curriculum.

Factors and Conditions That Influence Growth

The results of scientific studies are very illuminating concerning the factors and conditions that directly affect or are closely related to the development of a meaning vocabulary. They indicate that four factors determine to a large extent the growth of a child's vocabulary, namely, his capacity to learn, the character of his social and economic environment, the nature and development of his interests, and the kinds of instruction received. The implications of the first three of these facts have been forcefully discussed by Brooks.

In the child's mental ability lie the possibilities and powers of acquiring a vocabulary. In the environment lie the stimuli which may affect him. His interests select and make effective certain portions of this environment which thereby become actual stimuli to increased word knowledge.⁴

⁴Fowler D. Brooks. *The Applied Psychology of Reading*, p. 60. New York: D. Appleton and Co., 1926.

The fourth of these factors, namely, the kinds of instruction given, is of special significance in this discussion. Its importance has been emphasized in various vocabulary studies, particularly that of Bonser, Burch, and Turner, who compared growth in meaning vocabulary in two schools which differed widely in the general ranking of pupils in capacity to learn and in social and economic background. An extended study to determine why the less favored of the two groups made the greater progress during the experimental period in acquiring a meaning vocabulary led to the conclusion that the explanation lay largely in differences in the kind of instruction given. Some of the chief characteristics of the curriculum and teaching in the school which excelled were described as follows: (a) "Its subject matter is intimately and vitally related to everyday life — the school work giving meaning and understanding to the daily activities of which the child himself is a part"; (b) "the pupil is made to experience in his own life as much as possible of the race experience that is of fundamental value"; (c) "the general plan of work calls for initiative and constant participation on the part of pupils comparable to that called forth by play and home life"; (d) "the problem method of teaching, necessitating organization and clear, purposive thinking on the part of both teacher and pupils, is almost forced by the nature and content of the curriculum"; and (e) "because the matter presented is vitally related to the life of the children, their expression is spontaneous, free and adequate." The statement should be added that the importance of vitalized content, compelling motives, and humanized methods is emphasized by practically all writers in this field.

Specific Methods of Promoting Vocabulary Growth

Assuming vital content and a strong motive for learning, what are the specific methods used by teachers in promoting vocabulary growth? Without doubt the method most widely adopted is to allow pupils to infer meanings from the context. In a recent study⁵ involving the co-operation of 1527 successful teachers of reading, it was found that from 85 to 95 per cent of the teachers in each of the first six grades made conscious efforts to develop ability on the part of their pupils to derive the meaning of new words from the context. The specific advantages which attach to this procedure have been summarized pointedly by Professor Thorndike:⁶ the knowledge thus gained is "genuine and important"; it is "welcome and attended to"; the information gained is functional in the sense that it serves immediately as an aid in reading; it will be "remembered a long time"; and will likely be kept alive by use in the near future. Such advantages justify the wide use of the context in promoting vocabulary growth.

But at this point contrasting theories and practices emerge concerning the enrichment of meaning vocabularies. One assumption is that growth is secured most effectively through wide silent reading with little or no direct guidance in the understanding and use of words. The proponents of this view believe that the reader will either secure essential meanings from the context or will ask or seek for the meanings of the words he does not know. The validity of the incidental method is vigorously challenged by many teachers and supervisors. They maintain that pupils are unable, as a rule, to recognize their deficiencies and needs in re-

⁵*Better Reading Instruction: A Survey of Research and Successful Practice.* Research Bulletin of the National Education Association. Vol. XIII, No. 5, 1935. Pp. 273-325.

⁶Edward L. Thorndike. "Improving the Ability to Read." *Teachers College Record*, Vol. 36, pp. 9-10. Oct. 1934.

spect to the meanings of words and consequently fail to discover or ask for the meanings of many words which they do not know.

To secure evidence on this point, several experiments have been carried on. In one study a selection in history was given to fourth grade pupils with the direction to read it three times: first, just to see what it was about; second, to draw a line under each word not understood; and third, to answer questions about the content. Finally, the pupils were given 48 statements which involved in various ways the meanings of 16 key words in the selection.⁷ A comparison of the reports submitted showed that the pupils had checked accurately some of the 16 words they did not know. On the other hand, they often failed to check as "not understood" words on which they failed in the test; they also often checked words to which correct responses were made in the test. Oral questioning showed that the test responses reflected quite accurately their knowledge of the meanings of key words. These findings support the contention of Professor Horn and others that children are unable to recognize their deficiencies in respect to word meanings and so require guidance.

The validity of this conclusion was further verified by the results of a controlled experiment to determine the relative merits of incidental and direct methods of expanding and enriching meaning vocabularies. The data secured showed conclusively that the direct method is far more effective than the incidental in improving the pupil's comprehension of what is read. Furthermore, it not only develops greater accuracy in the recognition and pronunciation of new words and

greater clarity in verbal reports of the content, but what is even more significant, it usually insures a more detailed and accurate comprehension of specific meanings, a clearer grasp of the relationship between the ideas presented, and a more orderly organization of essential meanings. It follows that wide reading by pupils should be supplemented by carefully planned guidance at frequent intervals to attach clear, vivid meaning to words. In this connection the fact should be emphasized that the amount and character of the guidance needed varies with individual children. Consequently, group guidance should be supplemented frequently with individual help adapted to specific needs.

The facts presented justify the plea for a broadly conceived program of instruction in every school which aims to increase meaning vocabularies in harmony with the needs of pupils. Some of the essential aspects of such a program include extensive reading with attention to the content, training pupils to infer meaning from the context, casual emphasis on the meanings of some words, vigorous and direct attack on the meanings of others, drill on lists of specific words which have elements similar to those in other words, stimulation of the voluntary study of words, and training in the use of the dictionary. In providing specific help on new or unfamiliar words, teachers may be guided to advantage by three aims: (1) to form clear, vivid associations between oral and written symbols and their meanings; (2) to promote the development of the habit of using the context in deriving the meanings of words and phrases; and (3) to provide opportunity for pupils to use the new words appropriately in either oral or written form.

⁷William S. Gray and Eleanor Holmes. *The Development of Meaning Vocabularies in Reading: An Experimental Study*. Publications of the Laboratory Schools of the University of Chicago, No. 6, 1938, pp. 36-37.

Approach to Primary Speech Problems

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EDITOR'S NOTE: The author here suggests means of correcting certain language faults common in the primary grades. In each instance, she first suggests positive attitudes and habits to be established, then remedial treatment, and finally, activities that will help establish the desired habits.

Self-consciousness

We wish to establish a feeling of belonging in the group, a sense of security, and a comfortable, easy attitude.

Suggestions for remedial treatment: The timid child needs encouragement, appreciation, and praise. Discover the child's interest. Ease can best be fostered in a small, informal group. Avoid subjecting a timid child to group criticism.

Suggested activities: Relating short personal experiences. Center child's attention upon other persons' thoughts. Lead child to concentrate on the experience, to avoid embarrassment. Encourage him to select an experience similar to those being related.

Choosing unpleasant topics

We wish to establish a choice of wholesome interests as topics of conversation.

Suggestions for remedial treatment: Encourage conversations about people liked, and pleasant and happy things. A happy childhood is the natural heritage of each child, but because of broken homes, economic and living conditions, the modern child is unfortunately sharing much of the family distress.

Suggested Activities: Narrating incidents of a happy experience, such as "Fun I Had Over the Week End," "My Surprise," etc. Monday morning is a splendid

opportunity for narrating only happy little episodes in one's life.

Feeling of inferiority

We wish to establish the desire to participate in and contribute to group conversation and discussion.

Suggestions for remedial treatment: Know the child's home conditions, and attempt to determine the cause of the feeling of inferiority. If you can do so sincerely, praise his achievements; let the child have a feeling of success.

Suggested activities: Provide situations in a sympathetic classroom atmosphere where a child may have freedom of expression in many fields, such as rhythm, art, and dramatization.

Aggressiveness

We wish to establish the habit of listening courteously when another is talking, and waiting one's turn to talk.

Suggestions for remedial treatment: Aggressiveness is often caused by a feeling of inferiority. Handle such a child in much the same way as you would a timid child. Give him individual work. Provide also situations calling for co-operative effort. Place him in a group of his own ability equivalent, or better.

Suggested activities: Group discussions of routine matters such as fire-drill, how to carry chairs, how to stand in line in the cafeteria, how to use the drinking fountains, how to clean up after a work period, how to turn the pages in a book, behavior in the school library, care of wraps, care of the canary bird, what to do about certain room problems, etc.

Monopolizing the conversation

We wish to establish an appreciation for the contributions of others—the feeling that others have things to say as interesting as his own thoughts.

Suggestions for remedial treatment: The voluble child has not learned to listen. He must become aware that listening can be as pleasant an experience as talking.

Suggested activities: See the suggestions under "Aggressiveness."

Exaggeration

We wish to substitute the habit of recounting happenings and narrating experiences accurately.

Suggestions for remedial treatment: Give the imaginative child ample opportunity for creative expression. Lead him to distinguish between fact and fiction, happenings and imagination. Insist that he be careful to tell the truth.

Suggested activities: Suggest topics of conversation based on experiences common to several children, such as "On the Way to School," "After School on the Playground," "A Birthday Party," "My Playhouse," etc.

Incoherent, inaudible speech

We wish to establish the habit of speaking audibly and distinctly in a pleasant voice.

Suggestions for remedial treatment: Examine the child for physical defects. Bring about group approval of clear, natural speech. Encourage short units. Ignore any difficulty due to missing teeth.

Suggested activities: Orientation problems such as the names of the children and teachers, the location of the principal's, the counselor's and the nurse's offices, location of the lavatories, the library, the cafeteria, etc.

Inability to answer questions

We wish the pupil to answer questions directly and definitely.

Suggestions for remedial treatment: Inattention, day-dreaming, lack of concentration, or interest outside the topic, are often the causes of evasion or non-response to a question. Help the child to attend to the immediate problem at hand. Afterward, if possible, attend to his interest.

Suggested activities: Plan a lesson based on such questions as the following: "What is your name? Where do you live? Name the members of your family. When is your birthday?" Express approval of definite, clear answers.

Inability to deliver a message

We wish to establish an ability to convey invitations and deliver messages accurately.

Suggestions for remedial treatment: Here there is greater need for preparation than in spontaneous conversation. Oral invitations and messages must be clearly and briefly stated, and expressed courteously.

Suggested activities: In the social organization, there are frequent occasions for delivering messages, such as, "Will you please lend Miss S— a vase?" "Come over and see our aquarium." "Will you help me find my lost puppy?"

Inattention, listlessness, indifference

We wish the child to have something to say and the ability to say it well.

Suggestions for remedial treatment: Children should learn that the privilege of having listeners carries a responsibility. A small, informal group minimizes inattention.

Suggested activities: There are many opportunities in life-like situations for spontaneous conversation and discussion of real problems growing out of daily experience.

Interrupting the speaker

We wish the child to learn to enter the conversation only when there is a proper opening.

Suggestions for remedial treatment: Help children to care for such interruptions as are made in a courteous manner. Keep organization flexible. Avoid unnatural formalities.

Suggested activities: Give opportunities for enriching the background of experience and knowledge.

Rambling speech

We wish to establish the ability to speak to the point, and to keep the topic clearly in mind.

Suggestions for remedial treatment: Insist that the child stick to the topic, telling only what pertains to that specific experience.

Suggested activities: Developing definite topics, such as "My New Shoes," "Our New Car," "My Sunday School," "My Tooth Came Out," "My Baby Sister."

Uneasy Posture

We wish the child to sit and stand naturally, and to acquire an easy and natural manner.

Suggestions for remedial treatment: Lead the child to look directly at those to whom he is speaking, to speak to the group, not merely before it, and to concentrate on the experience. Stimulate confidence by sincere approval.

Suggested activities: Discussions based only on those problems which warrant the attention of the entire group. A child will lose himself in an absorbing interest. Ask the individual to talk only about the thing in which he has a vital interest.

Inability to use phrases of courtesy

We wish to promote the habit of using spontaneously conventional phrases of courtesy.

Suggestions for remedial treatment: Through the process of social adjustment, the child develops a sense of friendliness and familiarity with phrases of courtesy valuable and meaningful to him.

Suggested activities: Asking for an article or favor. Returning an article to its owner. Asking pardon for passing in front of some one, interrupting another, or hurting someone unintentionally.

A meagre vocabulary

We wish to encourage growth in the use of an enriched vocabulary.

Suggestions for remedial treatment: A child feels a need for words adequate to give expression to natural curiosity in his environment. Provide a rich environment and interesting first-hand experiences. The teacher's choice of words stimulates use by the children.

Suggested activities: Newly acquired words in units of work become active because the activities involved encourage their use. Vocabulary is stimulated by nature interests, books, play equipment, pictures, tools, and materials of all sorts.

Lack of originality

We wish children to be able to contribute something new to the group.

Suggestions for remedial treatment: Encourage co-operation in securing information and materials, and utilize vital language learnings which result. Respect opinions and suggestions as to use of materials brought by the children.

Suggested activities: Children's conversation is stimulated by the contributions of others, such as a desert turtle, a horned toad, pretty cloth, some magazines, a box of spools.

Unsatisfactory host, or guest

We wish the children to be courteous, thoughtful hosts, and appreciative guests.

Suggestions for remedial treatment: The right social attitudes are the basis of courtesy.

Suggested activities: Making plans for the entertainment of expected guests. Receiving and dismissing guests easily and courteously. Showing interest in the entertainment. Expressing appreciation for a good time.

Disorganized thought

We wish to promote growth in the ability to express simple ideas clearly, distinctly, and connectedly.

Suggestions for remedial treatment: Speech is a symbol of thinking. A child should grow in the ability to understand what others say, and to make himself understood.

Suggested activities: Suggest topics for discussions which have definite sequence of ideas, such as: How I was lost; What I did; How I got home.

Poor sentence structure

We wish the children to possess the ability to speak in sentences.

Suggestions for remedial treatment: A child's language units are short. Insisting upon sentences is artificial and probably unnecessary. Development of sentence sense in oral expression is a matter of growth.

Suggestive activities: One way of developing sentence consciousness is

through the building of an incidental reading lesson, based on a vital group experience, such as an excursion, a rainy day, a walk in the neighborhood, etc.

Usage errors

We wish children to possess certain forms of good usage.

Suggestions for remedial treatment: In all normal speech situations, content is, and should be, of primary importance. If the teacher insists upon accurate speech before interesting speech, the result will be stilted and self-conscious. Praise the better speech of some children.

Suggested activities: During the conversation period, note the errors made. End the period, if feasible, by repetition of the correct form used in varied connections. With a little child, choice of words which good usage dictates is a matter of habit, not of reasoning.

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GUIDING VOCABULARY DEVELOPMENT IN THE KINDERGARTEN

(Continued from page 70)

sonal experiences with real objects, persons, and situations. Because of the interaction of the child with this environment, both his attention and his thought will flourish.

In conclusion, the activities that are guided in the natural and normal surroundings of the kindergarten can help to give meaningful ideas to children and should develop an enriched vocabulary.

New Words

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ONE FINE WAY to develop creative writing is to build first an enthusiasm and interest in new words. Give them a fascination, develop a curiosity about them, and then begin using them. Children love big words and new words; it is always fun to get them started. They may use them incorrectly at first but they will soon learn how to place them in a sentence and how to make the paragraphs read more smoothly. The first and most essential step is to get them interested, then each phase of growth is more easily planned.

One of the best ways to accomplish this is by the group method of story writing. It can be carried out in grades from the fifth through the ninth. It requires more planning and work on the part of the teacher before presenting the lesson but reduces the amount of work which usually follows.

How is it done? First, decide upon a topic, then divide that topic into seven or eight paragraphs with little suggestions under each topic which might help in developing the paragraph. Next, divide the class into seven or eight groups with three or four in each group. Group one then would develop the first paragraph, group two the second paragraph etc.

Before starting, talk up the subject. If it is a baseball game ask where the crowd sits, what they do while they wait for the game to start, how the people are dressed, are they dignified, what are some of the comments heard as they watch the players practice before the game and after the game. How do peo-

ple act when the game starts, during the game and after the game? Describing the crowd leaving would be another paragraph.

Develop with the class a list of new words which they might use in writing the story. Put them all on the board so that the class can see them and use them. Perhaps you might get such words as *grand-stand, bleachers, ardor, maneuver, endure, protrude, rigorous, eliminate, forfeit, vibrate, brandish, terminate, exhaust, fatigue, remote, swirl* and perhaps *murky* and *sultry* to describe the day. It is well to have some adverbial expressions that would suggest smooth reading as—*not long after, at length, at last, finally, before this, presently, instantly, suddenly* etc. Suggest that they try to make use of as many new words as possible.

Give the class about fifteen minutes to write their assigned paragraphs, then have each one read his aloud, in turn, to his group, for criticism. In doing this the child will recognize many of his own mistakes and correct them as he reads; those in the group will suggest changes too. Give them about twenty minutes for this and then have the best one from each group read aloud, the group deciding which is best. Begin with the first paragraph and go right through the story. This will give them an idea of how to connect the paragraphs.

Next, set each one to writing the complete story. Allow fifteen minutes for them to start this and let them finish during a study period. Next day follow through the plan the same way, but instead of having the best paragraphs read

you would have the best story read from each group. This repetition of reading and writing makes the child more alert and self-corrective. Teach the child how to find synonyms in the dictionary and the value of substitution. They will soon recognize the weakness of repetition and the beauty of variety in expression. After several writings, the story is copied in ink and presented to the teacher. By this time there is much less for the teacher to correct and because the child has corrected his own mistakes it has made him stronger.

When you first try this plan it may seem too noisy, but that will tone down after they become familiar with the plan. The results are worth the noise. What you really have done is broken down all formality and created a spirit of adventure and freedom with the class—that is the only way to develop creative work.

After using this plan two or three times, it would help if the teacher could read to the class stories on the suggested topic, calling attention to certain rich words or expressions that are found in the readings.

Some good topics for such writing might be: Getting a Tooth Pulled, A Circus Parade, Taking the Report Card Home, A Fire, Christmas Shopping, Changing a Tire, Learning to Skate, The Grocery Man. The subject should be within the possible experience of the child so that he can make his writing realistic. Such topics as "The Grocery Man" make them more keen on details that enrich writing.

In the following paragraphs are lines and phrases quoted from themes developed in this way; their richness of expression is surprising.

A seventh-grade boy in writing on "The Approach of a Storm" speaks of "phantom clouds"; "the wind passed

through them, leaving them as tresses of wavy hair"; "dismal shadows."

Another lad when writing on "The Autumn Woods" says, "The golden glow of the setting sun was penetrating through the leafy boughs of the noble trees and the manifold colors were blending with the deep scarlet of the rays of sunlight." "The leafy cedars were whispering facts to the slim, perk young ones." "Twilight started to advance to take the forest captive." "The large tree family started to respect their evening devotions, murmuring in soft and subdued tones."

In writing on "The Arrival of a Friend" another boy said, "Out of the clamor which instantly arose, stalked my friend with the non-committal air of the city-bred man."

Still a different boy in writing about "A Winter Scene on a Moonlight Night" employed such lovely expressions as; "Jack Frost painted a tattoo of most unexcelled workmanship." "Near evening a host of lazy but soft caressing flakes lowered themselves on the wings of the wind to the dirty gray ground below." "The lights from the houses cast long shadows upon the white, fluffy blanket."

Strange as it may seem, the boys, most of the time, responded with greater enthusiasm to this plan and often presented better work than did the girls. Perhaps it was the game spirit that helped it all along. At any rate, the plan fascinated the boys and they would work and work on their stories; they appeared to be receiving real joy in writing. It developed and drew from them any aesthetic appreciation they might have had; it was a game to them that brought out all the fineness each possessed.

Of course children may over-load the theme with picture words, making the reading heavy and the sentences at times

Suggestions for Improved Spelling in Grade Five

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TODAY, we recognize that spelling, like handwriting, is a tool, a means to an end. The only justification for teaching a child to spell any word is that he is expected to use it in his writing reasonably soon. And if there is no check upon this use, if the child feels that he is not expected to do anything with the word except to spell it in the classroom, the time and energy spent in teaching cannot be justified. Moreover, the child will not react acceptably to such apparently unprofitable teaching efforts.

Spelling instruction should be based on knowledge of the ways in which individuals learn to spell effectively. These learning factors are basic: (1) Create the *desire to learn* to spell accurately. (2) Make multiple sense appeals by pronunciation, oral and visual syllabication, and writing. (3) Cultivate primarily the ability to visualize or discriminate the details in a word. (4) Give meaning to the written word. (5) Encourage the learner to adopt an effective individual method of learning to spell. (6) Recognize the contributions of incidental learning and reading to better spelling.

In order to demonstrate that proper guidance in study procedure would result in a gain in spelling ability, this study of improved spelling methods was conducted at Forest Park School in Fort Wayne, Indiana. This school draws its pupils from one of the best residential districts of the city: the pupils are without exception American born and come of American born parents. The children live in an environment of good spoken English,

and their families are above average in education and in economic standing.

As a check on the results of the use of improved methods, two groups of students, numbering twenty-four each, were formed from the 5-B Grade. As nearly as possible, the two groups were equal in all factors that strongly influence learning.¹ One group of pupils was known as the Routine Group, the other as the Remedial Group. Both groups were taught by the same teacher.

The Routine Group was taught by the methods of the regular course of study for the 5-B Grade, and covered the basic word list and contextual sentence exercises of the prescribed course of study. Their lessons were planned as three steps taken at an interval of one day. The first, a twenty-minute study of the words to be learned; the second, a twenty-minute dictation exercise which includes the words studied; the third, a period of thirty-five minutes in which the exercise is returned to the pupil for corrections. Before the correction period, the teacher collects the papers and marks them for errors in spelling, punctuation, capitalization, and syllabication. Each pupil corrects his own paper, using the dictionary rather than the speller as reference for all correction.

The Remedial Group also covered the regular course of study for its grade, and in addition, used a blackboard list which included words for immediate and local needs of the whole group, and prepared

¹Number in each group—24. Median chronological age: Remedial group—10 yrs. 7 mo. Routine group, 10 yrs. 6½ mo. Median mental rating—C+ for each group.

individual study lists of the troublesome words. The special methods were planned to develop sensitiveness to new spelling difficulties with the ability to meet them intelligently, to make the spelling of familiar words a matter of automatic response, and to establish more effective habits of study.

Throughout the study, emphasis was placed upon the use of words to express meanings, so that the pupils have some incentive to expand their vocabularies to meet their growing needs. Contextual application was an important part of the program and had equal consideration with list spelling. For uniform presentation and checking, the study-test-study-test method was selected as the most efficient for helping the class to acquire an adequate writing vocabulary for their present-day needs. Specific methods for presentation and study were consistently used.

The most important single factor in learning a new word is a correct first impression of the word. If a child sees and hears a word correctly the first time he studies it, he will in all probability spell it correctly. If there is immediate recall followed by frequent reviews, automatic correctness is reasonably certain. To insure correct first impressions, the lantern was used for the first presentation of the word lists.

In order to help the pupils to form associations and classifications of words, a few rules were developed inductively. The following rules were justified by the fact that they cover a large number of cases and have few exceptions. (1) words ending in consonant *y* change the *y* to *i* before all suffixes except those beginning with *i* (*party*, *parties*). (2) Final *e* is retained before a suffix beginning with a consonant (*care*, *careful*). (3) Letter *q* is always followed by *u*.

Each pupil was made to feel a responsibility for his own plan of study. But in order to guide independent study, the following plan was suggested:

Pronounce the word and write it correctly.
Look at the word and spell it three times.
Close your eyes and spell it.
Go through the movements of writing it.
Write it without looking at the copy.
If there is a mistake, start again.

The pupils should be impressed with a greater feeling for the significance of the daily spelling lessons. To develop this, a spelling tablet was substituted for the customary single sheet of paper for the daily work. Whereas the latter is written on, scored, and immediately discarded, the former furnishes all paper needed during the semester, and furnishes such organization that the permanence of the daily work is stressed. Then, too, the past lessons serve as an incentive to better the record on present work.

To impress upon the pupils that immediate mastery is not consummated without more or less permanent mastery, and to have an objective measure of improvement, standardized tests were administered. The results of these tests were plotted on graphs, which proved to be among the strongest incentives for improvement. The graphs were kept by the pupils themselves, caught the interest of the whole group, and emphasized the work of the better pupils in the class.

The three primary tests used during the eighteen weeks period were standardized list tests of 50 words each, compiled by Horn and Ashbaugh to cover the three consecutive units of work included in the course. The course of study also provided for weekly dictation tests which were administered to both groups. In addition, the pupils of the Remedial Group *only* were given a list test covering each week's work. From the errors on these

weekly lists the individual work lists were made, and the results of the weekly tests were charted on the graphs.

Table I indicates clearly and briefly the organization and methods of the improved spelling program.

A number of specifically helpful measures were used with the Remedial Group. A brief listing will suggest some

beginning with silent letters and those having the same silent letters in the same position in several words. (9) Stress the double consonant in presenting words having them. (10) Use catchy jingles to illustrate rules, for example:

I before e
 Except after *c*
 Or when sounded as *a*
 As in *neighbor* and *weigh*.

TABLE I
 ORGANIZATION OF REMEDIAL WORK.
Time allotments 15 minutes each day

	Pupils of poor spelling ability	Pupils of average spelling ability	Pupils above average in spelling ability
Monday	Lantern presentation of weekly word list with pronunciation and meaning emphasis Quick drill, spelling game, matching words, etc.		
Tuesday	Spelling activities Organized study with teacher Short spelling game for all		
Wednesday	List test Checking and recording by pupils		
Thursday	Remedial work with teacher Pupil-partner assistance	Independent study; "how to study a word"	100% pupils excused. Others, independent study
Friday	Contextual exercise Checking, correcting, recording by pupils		

of them. (1) Take care in pronunciation at the first presentation. (2) Require correct pronunciation of the pupils. (3) Provide many opportunities for the use of words which give trouble. (4) Build up associations of similar structure with some difficult words: "Never *believe* a *lie*." (5) Relate the study of spelling to personal likes in order to arouse interest. (6) Keep the pupil's progress vividly before him by the use of graphs. (7) Stress the unphonetic character of many English words. (8) Call special attention to silent letters: group together words be-

(11) Use meanings to fix forms, especially with homonyms. (12) Establish meanings by pictures and experiences common to all children. (13) Stress correct letter formation in all written work. (14) Afford practice by using real spelling situations. (15) Try to get the pupil to compete with himself. (16) Train the pupils to recognize quickly similarities in structural elements in order to provide for the greatest amount of transfer in spelling situations. (17) Plan reviews carefully.

The results of the different teaching methods over the period of eighteen weeks are seen in Table II, which shows the comparison of the groups and the results as measured by the Horn-Ashbaugh tests.

TABLE II
COMPARISON OF RESULTS

Groups	Horn-Ashbaugh Tests (Median Scores)			Horn-Ashbaugh Dictation Test	
	I	II	III	Average right	Standard right
Remedial	96.0	96.0	98.0	19.583	12.0
Routine	74.0	72.0	75.0	16.708	12.0
Difference	22.0	24.0	23.0	2.875	

The results of this study would indicate three main causes for failure in spelling: first, a faulty image of the word which may be due to careless observation when it is presented, to incorrect or exaggerated pronunciation, to a writing difficulty, or to failure to associate a meaning with the word. Second, inadequate image of the word may be due to the word's unphonetic construction, to the presence of double letters, or to the possibility of an alternative. Third, confusion of two images may be due to a weak initial impression of the word, to homonyms, or possibly to carelessness.

In summary, the following recommendations may be made in the interests of improved teaching methods for spelling in the fifth grade. (1) Both list and contextual spelling exercises are necessary. (2) Spelling should be pursued systematically and continuously: a maximum period of fifteen minutes of intense, snappy work each day is highly satisfactory. (3) Individualized programs of work make for greater success. (4) Stress the early development of proper techniques for word-attack rather than the acquisition of a set spelling vocabulary. (5) Give sufficient attention to find out why

certain pupils are not making sufficient progress. (6) Provide better methods for teaching pupils of varying ability. (7) Words serving immediate needs and words having particular difficulties for individuals should supplement the basic lists. (8) Spelling should be identified with all written functional activities. (9) Words phonetically similar should appear together to provide all possible transfer of identical elements. (10) Meaning should precede spelling. (11) The student should develop an independent plan of study. (12) A set of standard tests should be used to measure achievement and improvement. (13) Progress should be checked at frequent intervals and records made of individual and group improvement: for this purpose graphs prove to be strong incentives to better work.

This study has revealed that spelling is a vital, interesting, and living process. Several specific problems have been solved, and the belief established that spelling ability can be raised by the use of scientific methods of learning. The success of the work with the Remedial Group has demonstrated that variety and novelty in teaching methods stimulate good spelling habits, and that guidance can be made functional in this classroom situation.

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NEW WORDS

(Continued from page 82)

clumsy. Nevertheless, if for one year a teacher can work continuously to build vocabulary and overlook the other errors so that a child will not feel lost in mistakes, she has gone a long way to build a foundation for creative writing.

This method establishes a habit of acquiring new words and a sincere desire for richness in expression. It is something which will grow with children if the plan can be used long enough to establish such desires.

Editorial

Of The Essence Of Life

THERE IS at present much speculation on how we use words; what words mean to us; how new words are acquired; and whether we should not limit our stock of words, especially in the reading vocabularies of children. We are word-creatures, and of late are coming to recognize it.

The articles by Dr. Thorndike and Dr. Knott in this number of *The Review* comment on the subject of the understanding and acquisition of new words with a common sense that tempers, and renders effective the theories and findings of research workers. Take, for example, Dr. Knott's statement (p. 65): "The less intelligent children need experience to help increase their vocabularies. The more intelligent need it to prevent them from becoming mere verbalists. But, just as there are different kinds of words, so there are different kinds of experience . . . the meaning of abstract words can be learned best only by meeting them with some frequency in context, and also getting a good definition."

Those who maintain, with more or less heat, that words can be understood *only* through experience, would do well to contemplate this, and also to ponder some of the implications in Mrs. Hesse's study (p. 68) of the vocabularies of kindergarten children.

Mrs. Hesse found that seven per cent of the words used by the children were not comprehended. These words not understood by the users are highly interesting pedagogically, for they constitute a potential vocabulary. The children use them, but they do not know them—yet. Some they will know, sooner or later, but

others they will continue to use, although they never understand them thoroughly.

The fact is that all of us use words continually that we do not, and cannot thoroughly understand. We sense their meanings; they evoke images and emotions; the words are useful and serve us faithfully. We do not know all about them, for this is a matter of growth. It is only very gifted speakers and writers who use words with increasingly great precision. Take Dr. Thorndike's list of difficult words—*if, though, because, but, God, and soul*. All of us can add to this list, and all of us are aware of the fact that precision in the use of such words is a matter of approximation.

Remembering, then, the large number of these partially-known words, and their tremendous importance and usefulness, it would appear unwise, if not, indeed, impossible, to limit children's vocabularies severely in their reading, or any other way. Dr. Knott pleads, "Let us balk at books that contain only words already known to the children." Instead of trying to limit vocabularies, we teachers would do better to try, as Miss Babcock has ("New Words," p. 81) to enlarge them. For, in giving children new words, even half-understood words, one sets back the boundaries of their minds and imaginations, and offers their thoughts ever wider and richer range. Experience, in the very inclusive sense, may give new meanings. In the meantime let us not forget that to children, who as has already been said are word-creatures, encountering new words *is* an experience, and notably so if the words are sources of delight and prove to be useful servants.